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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,705	05/18/2006	Joseph Kennedy	089498.0482.US	2929
39905	7590	01/19/2011		
Joseph J. Crimaldi Roetzel & Andress 222 S. Main St. Akron, OH 44308				
EXAMINER				
ZEMEL, IRINA SOPHIA				
ART UNIT		PAPER NUMBER		
1765				
MAIL DATE		DELIVERY MODE		
01/19/2011		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,705

Applicant(s)

KENNEDY ET AL.

Examiner

Irina S. Zemel

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The rejections not addressed below are deemed withdrawn.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-5, 7, 9-12, 14-26, and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0949 282 to Kaneka Corporation, (hereinafter "Kaneka '282").

The rejection stands are per reasons of record set for the in the previous office action and incorporated herein by reference. As discussed in the previous office action, the reference not only expressly discloses norbornene as a suitable cationically polymerizable monomer for the second block, (which is now deleted from the scope of the claims), the reference further expressly discloses suitability of dicyclopentadiene for forming the other (non-isobutylene) polymer block. Cationic polymerization of dicyclopentadiene results in polymer corresponding to the last formula recited in claims 1 and 20.

In addition, the reference expressly discloses ethylidene norbornene as a suitable monomer, i.e., a compound structurally similar to another claimed polycycloolefin from norbornadiene monomer group (as term norbornadiene is defined by the applicants), which represents yet another at least homologue obvious structural units to the claimed cycloolefin segments.

The invention as claimed, thus is fully within the purview of the cited reference, and clearly discloses each and every claimed element thus anticipating the claimed invention..

Claim Rejections - 35 USC § 103

Claims 6,8,13 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneka '282.

The rejection stands as per reasons of record set for the in the previous office action and incorporated herein by reference.

Claims 1, 7, 9-11 are under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,804,664 to Kennedy et al., (hereinafter "Kennedy '664") in combination with Kaneka '282.

The disclosure of Kennedy is discussed in detail in the previous office actions. While expressly disclosing norbornene or pinene as suitable monomers for the second stage polymerization, the reference does not disclose "norbornadiene" monomers that results in now claimed structures. However, the reference states that "[a]ny cationic polymerizable monomer substantially incompatible with the monomer used in the first addition polymerization can be added to form the block copolymer" (col. 9, lines 23-26).

Kaneka '282 discloses a wide variety of monomers that can be cationically polymerized to form a block with polyisobutylene block, including the monomers disclosed by Kennedy and also monomers that result in "norbornadiene" segments upon polymerization such as dicyclopentadiene or ethylidene norbornene. Therefore,

use of such monomers for the second addition polymerization of Kennedy would have been obvious with reasonable expectation of success in view of express teachings of Kennedy of suitability of any cationic polymerizable monomer substantially incompatible with the monomer used in the first addition polymerization can be added to form the block copolymer, and also in view of the teachings of Kaneka '282 disclosing suitability of specifically claimed monomers for cationic co-polymerization with PIP blocks.

It is expressly noted that no unexpected results that can be attributed to the presence of either one of three recited cycloolefin segments (especially as compared to now deleted norbornene) is presented on the record.

Response to Arguments

Applicant's arguments filed 7-19-2010 have been fully considered but they are not persuasive. The applicants make the same arguments with respect to the rejections based on either one EP '282 or Kennedy as the primary reference. The applicants state that the primary references do not disclose the invention as claimed in the pending claims, specifically that the references do not teach blocks based on norbornadiene monomer compound. As discussed above, this is not so since the EP '282 (Kaneka '282) reference expressly teaches at least dicyclopentadiene as one of the suitable polymerizable monomers, which compound (expressly included by the applicants in the "norbornadiene" class of compounds as per instant claims) fully correspond to the last compound disclosed on page 6 of the instant application, resulting, upon polymerization, in the last compound claimed in claims 1 and 13. compound. In

addition, the reference also discloses ethyridenenorbornene, which is a homologue of another (third) compound expressly disclosed in the instant specification. Therefore, as discussed above, the invention as claimed is still considered to have been obvious from the disclosure of the cited references (alone or in combination as set forth above.)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1765

Irina S. Zemel
Primary Examiner
Art Unit 1765

ISZ

Application/Control Number: 10/561,705
Art Unit: 1765

Page 6